

CLAIMS:

1. A liquid crystal displaying apparatus capable of displaying a color image comprising a liquid crystal panel in which each main pixel unit including a red sub-pixel, a green sub-pixel, a blue sub-pixel and a luminance-enhancing sub-pixel characterized by comprising:

5 calculation means for calculating digital output values R_o , G_o and B_o for driving said red sub-pixel, said green sub-pixel and said blue sub-pixel, respectively, from digital input values R_i , G_i and B_i respectively for said red sub-pixel, said green sub-pixel and said blue sub-pixel and a predetermined digital value W for driving said luminance-enhancing sub-pixel so that a relationship of $R_i:G_i:B_i = (R_o+W):(G_o+W):(B_o+W)$ is
10 satisfied, said values R_i , G_i and B_i being obtained from an input color image.

2. A liquid crystal displaying apparatus according to claim 1 characterized in that said digital value W is obtained in accordance with a function represented by a formula $W = f(Y_{min})$ where Y_{min} is a minimum value of said digital input values for said red sub-pixel,
15 said green sub-pixel and said blue sub-pixel.

3. A liquid crystal displaying apparatus according to claim 1 characterized in that said digital value W is obtained in accordance with a function represented by a formula $W = f(Y_{max}, Y_{min})$ where Y_{max} and Y_{min} are a maximum value and a minimum value,
20 respectively, of said digital input values for said red sub-pixel, said green sub-pixel and said blue sub-pixel.

4. A liquid crystal displaying apparatus according to claim 3 characterized in that said function represented by said formula $W = f(Y_{max}, Y_{min})$ is a function which
25 monotonously increases as a value of said Y_{max} value or said Y_{min} value becomes larger.

5. A liquid crystal displaying apparatus according to claim 3 characterized in that said formula of W is given by a function in which said Y_{min} is a variable with said Y_{max}

being a constant and in that said function represented by said formula $W = f(Y_{\max}, Y_{\min})$ is a function which monotonously increases as a value of said Y_{\min} becomes larger.

6. A liquid crystal displaying apparatus according to any one of claims 1 to 5
- 5 characterized in that said digital input values R_i , G_i and B_i for said red, green and blue sub-pixels obtained from said input color image are converted respectively into R_I , G_I and B_I as values having a dimension of luminance, and in that a relationship of $R_I:G_I:B_I = (R_O+W_O):(G_O+W_O):(B_O+W_O)$ is satisfied when luminance values for said red sub-pixel, said green sub-pixel, said blue sub-pixel and said luminance-enhancing sub-pixel are
- 10 represented by R_O , G_O , B_O and W_O , respectively.